Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz For Mobile and Fixed Services to Support The Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems	)	ET Docket No. 00-258
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum At 2 GHz for the Mobile Satellite Service	)	ET Docket No. 95-18
	)	
The Establishment of Policies and Service Rules for the Mobile-Satellite Service In the 2 GHz Band	)	IB Docket No. 99-81
	)	
Petition for Rule Making of the Wireless Information Networks Forum Concerning The Unlicensed Personal Communications Service	)	RM-9498
	)	
Petition for Rule Making of UTStarcom, Inc. Concerning the Unlicensed Personal Communications Service	)	RM-10024

REPLY COMMENTS OF GLOBALSTAR, L.P.

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EXECUTIVE SUMMARY

The comments filed in this proceeding demonstrate the important public interest benefits of MSS and the plans of the 2 GHz MSS licensees to offer advanced satellite services, including third generation ("3G") wireless services. A few large wireless telephone companies have demanded reallocation of the 2 GHz MSS spectrum for terrestrial mobile phone systems. But, given the relatively small amount of MSS spectrum at issue, and the spectrum requirements of the 2 GHz MSS licensees for satellite 3G services, the Commission should preserve the existing 2 GHz MSS allocation for MSS.

As terrestrial carriers upgrade their systems to offer 3G services to consumers, it is critical that MSS systems have sufficient spectrum to offer 3G services in rural and underserved areas. Satellite-delivered telecommunications services are essential to achieving the Commission's goal of making broadband services accessible nationwide, including to rural and underserved regions of the United States.

The fact that current MSS systems are not as successful in the marketplace as the large terrestrial mobile phone companies is irrelevant to whether the 2 GHz MSS spectrum should be retained for satellite-delivered services. The differences in marketing success have little to do with the lack of viability or need for MSS. Rather, satellite and terrestrial wireless systems have differing implementation issues, marketing strategies and subscriber bases. These differences make a comparison of market success between cellular/PCS and MSS specious and unfair.

MSS is not the first new service to suffer through a long start-up as a result of marketing difficulties. In similar situations, the Commission has taken the long-range view and given new services an opportunity to develop their potential to serve the U.S. marketplace. Like these new services, the record for the 2 GHz MSS allocation has established that the MSS spectrum is needed for services in the public interest. In light of the Commission's recognition that new services need time to develop and gain acceptance in the marketplace, Commission should preserve these public interest benefits and maintain the 2 GHz MSS spectrum for satellite-delivered services.

The comments from the MSS community also point out that there are critical international implications for any change in the 2 GHz MSS allocation. The United States led the effort to achieve the allocation for MSS in the 2 GHz bands at the 1992 World Administrative Radio Conference and to harmonize the allocations for 2 GHz MSS at the 1995 World Radiocommunication Conference to ensure the establishment of integrated, global satellite networks.

Curtailing the spectrum available to MSS systems can curtail delivery of MSS services globally, to the detriment of not only foreign subscribers, but also the United States and U.S. subscribers here and overseas. Moreover, curtailing MSS may shut down a line of communications to economically undeveloped areas of the world in derogation of the political, defense and economic interests of the United States and its citizens.

The Commission works cooperatively with the Department of State and the Department of Commerce to develop U.S. positions on global spectrum allocations in light of the global economic, communications and foreign affairs implications of MSS. It is the job of these agencies to maintain the United States' expansive, long-range perspective. In contrast, the terrestrial wireless industry now demands that the Commission focus on the needs of a few cellular/PCS companies. The Commission's responsibility and obligation are to provide for the public interest, and the public interest in MSS runs much deeper than the alleged needs of the mobile telephone giants. Therefore, the Commission should maintain the existing 2 GHz MSS allocation.

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REPLY COMMENTS OF GLOBALSTAR, L.P.

Pursuant to Section 1.415 of the Commission's Rules, Globalstar, L.P., submits this reply to the comments filed in the above-referenced dockets regarding the allocation for Mobile-Satellite Service ("MSS") at 2 GHz. [1]

[1] Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, FCC 01-224 (released Aug. 20, 2001).

I. THE RECORD MANDATES THAT THE COMMISSION MUST PRESERVE THE EXISTING 2 GHZ MSS ALLOCATION FOR SATELLITE SERVICES.

The comments filed in this proceeding present a stark contrast in perspective. On the one hand, the satellite industry has demonstrated once again the important and substantial public interest benefits of MSS and the plans of the 2 GHz MSS licensees to offer advanced satellite services in these bands, including third generation ("3G") wireless services. On the other hand, a few large wireless telephone companies have demanded reallocation of the 2 GHz MSS spectrum for terrestrial mobile phone systems based solely on their desire to warehouse spectrum for the distant future. Given the relatively small amount of MSS spectrum at issue, and the spectrum requirements of the 2 GHz MSS licensees for satellite 3G services, the record does not support the speculative demands of the terrestrial wireless carriers for this spectrum. Accordingly, the Commission should preserve the existing 2 GHz MSS allocation for MSS, and find other spectrum to meet the requirements for terrestrial 3G services.[2]

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[2] Iridium Satellite suggested that the Commission should create a separate terrestrial service in the entire 2 GHz MSS band that would be secondary to MSS. Comments of Iridium Satellite, at 2-3. Globalstar opposes this suggestion as simply infeasible. Transmissions on the 2 GHz MSS uplink spectrum from terrestrial mobile terminals operating co-frequency would be received by any MSS satellite in view. Therefore, if not coordinated, those transmissions would inevitably use satellite resources (power and bandwidth), and would adversely impact capacity of operational MSS systems even if there were no electromagnetic interference. Iridium's proposal is not technically feasible and should be rejected.

A. The FCC's Decision Regarding the 2 GHz MSS Allocation Must Be Governed by the Public Interest.

The record is now filled with examples of the varied and multiple public interest benefits of MSS.[3] The services and opportunities offered by MSS are all consistent with and expansions upon the goals set for MSS by the Commission in various allocation proceedings.[4] In summary, the record supports the view of Lockheed-Martin Corporation that "[d]espite the well-known problems that have beset the U.S.-licensed MSS industry in recent years, the MSS industry remains vibrant and continues to offer a wide range of services in the US and overseas."[5]

While the services available over existing MSS systems are first-generation voice and data services, the 2 GHz MSS systems will make available advanced, broadband services.[6] As terrestrial carriers upgrade their systems to offer 3G services to consumers, so must MSS systems plan that next-generation satellite

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[3] See Comments of Boeing Company, at 2-3; Comments of Globalstar, at 4-5; Comments of New ICO Global, at 7-14; Comments of Satellite Indus. Assoc., at 2-4.

[4] See, e.g., Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, 12 FCC Rcd 7388, 7394-95, ¶ 13 (1997) ("2 GHz MSS Allocation Order"), aff'd on recon., 13 FCC Rcd 23949, 23953, ¶ 10-11 (1998); Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum in the 1610-1626.5 MHz and the 2483.5-2500 MHz Bands for Use by the Mobile-Satellite Service, 9 FCC Rcd 536 (1994).

[5] Comments of Lockheed-Martin Corp., at 5.

[6] See Comments of Globalstar, at 4-5; Comments of Boeing Co., at 3; Comments of Constellation, at 6-7; Comments of New ICO Global, at 15-16; Comments of Iridium Satellite, at 2.

systems will offer 3G services. Indeed, all the licensed 2 GHz MSS systems will come into operation at the same time or after terrestrial networks have commenced offering 3G services.[7] Therefore, it is essential for the success of future MSS systems--including success at raising financing for construction and launch--that sufficient bandwidth is available to offer advanced services.

Another critical reason to maintain the existing 2 GHz MSS allocation was reiterated recently by Chairman Powell. In the context of making broadband services available *nationwide*, the Chairman emphasized that the Commission is responsible for "achieving ubiquitous availability of service at affordable rates for all Americans. It is the right goal, and it is the law."[8] As Chairman Powell noted, this is just as true for the broadband service offerings of the future as it has been for standard voice and narrowband data.[9]

Satellite-delivered telecommunications services are essential to achieving this goal because satellite systems represent the most effective means to deliver standard telephone *and* broadband services to rural and underserved regions of the

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[7] See "Cingular Moves to the EDGE" (Oct. 30, 2001) (detailing Cingular's implementation of third-generation mobile technology for its existing network) (available at www.cingular.com).

[8] Remarks of Michael K. Powell, Chairman FCC at the National Summit on Broadband Deployment, at 6 (Oct. 25, 2001).

[9] Id. at 6-7.

United States.[10] Nothing that the terrestrial wireless giants placed in the record refutes this simple fact.[11] Accordingly, in order to ensure the availability of 3G services *nationwide,* the Commission cannot give into the demands of a few cellular telephone companies to warehouse every piece of commercial spectrum for cellular/PCS. The Commission can fulfill its goals, and the law, by maintaining the allocation at 2 GHz for MSS.

B. The Mantra of "Market Forces" Does Not Provide a Rational Justification for Eliminating Or Curtailing MSS Spectrum.

The fact that current MSS systems are not as successful in the marketplace as the large cellular/PCS companies that filed comments in this docket is irrelevant to whether spectrum should be allocated for satellite-delivered services. Yet, that is the only premise underlying the demands of the cellular/PCS companies for reallocation of MSS spectrum.[12]

The differences in marketing success have little to do with the lack of viability or need for MSS. Satellite and terrestrial wireless systems have differing

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[10] See Comments of Constellation, at 3-4.

[11] Cf. Comments of Verizon Wireless, at 13 (stating "need for additional MSS spectrum is highly questionable" without any explanation); Comments of AT&T Wireless, at 7-8 (arguing that "allocation decisions should respond to end user demand" without acknowledging that there are far fewer users in areas where MSS is most needed).

[12] See Comments of AT&T Wireless, at 8; Comments of Cingular Wireless, at 10; Comments of CTIA, at 4; Comments of Telephone & Data Systems, at 7; Comments of Verizon Wireless, at 13.

implementation issues, marketing strategies and subscriber bases. Although the results of "market forces" may be useful for determining winners and losers within the same service, in which similar technologies and marketing strategies form a basis for comparison, the mantra of "market forces" alone makes little sense when applied to such disparate technologies as MSS and cellular/PCS.

For example, from the point of view of rural America and Native American areas, cellular/PCS is a "market failure" because it is not generally available. "Market forces" tend to make it difficult for these underserved areas to obtain telecommunications services because they are not sufficiently profitable. Nurturing MSS offers an opportunity to overcome the problematic economics of serving rural areas, as Globalstar has proved in rural Venezuela, the Amazon River Basin and the Australian Outback. On the other hand, abandoning MSS simply sanctions the urban-only business model of the cellular/PCS giants, and consigns rural areas to the wrong side of the digital divide's tracks.

MSS is certainly not the first service to suffer through a long start-up as a result of difficulty in marketing the service. As Constellation pointed out, the first commercial MSS system, Inmarsat, "has taken years to become a service and financial success." And Inmarsat was a government-sponsored, treaty-based monopoly!

> The Inmarsat system has taken two decades to grow from packages on spacecraft, providing essential maritime services to large shipboard terminals, to its current dominant position that includes the provision of data and

> news feeds from portable terminals throughout the world.[13]

Similarly, the first years of cellular service would not have served as a predictor of the current penetration rates of the terrestrial mobile phone market. In the first five years of subscriber statistics (1985-1990) compiled by CTIA, the cellular industry achieved about a 2 percent penetration rate.[14] It was not until a change in the market's perception of the uses for mobile phones and the falling price of service that cellular subscribership rose rapidly.

The cellular/PCS commenters, however, conveniently ignore their early years, and only focus on their current successes. But, comparing the successes of the cellular/PCS service that has been "established" for over 15 years with the history of three or four MSS systems that have been offering service for less than a third of that time is specious and unfair.

The Commission acknowledges this unfairness in its approach to regulating new services by recognizing that some services require a long ramp-up period and by nurturing rather than eliminating such services based on the public interest goals of keeping the service available. For example, Direct Broadcast Satellite ("DBS") required a long time to gain acceptance in the market. In 1982, the Commission first allocated spectrum at 12 GHz for DBS to provide improved video

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[13] Comments of Constellation, at 5-6 (footnote omitted).

[14] Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, 15 FCC Rcd 17660, 17746, App. B--Table 1 (2000).

services to rural areas, a greater variety of video programming and technically innovative services.[15] Just a few years later, as DBS was still developing, other services sought to dismantle the DBS allocation. In response to a petition by DBS licensee United States Satellite Broadcasting Company to offer non-conforming uses, Fixed Satellite Service and Fixed Microwave Service licensees requested initiation of proceeding to reallocate DBS spectrum "in light of USSB's 'admission' or their own predictions of the failure of DBS."[16] The FCC rejected these requests, and spelled out important policy considerations for regulating new services:

> One of the objectors' primary themes is that USSB's petition is evidence of the unsoundness of DBS, which has failed the "acid test" of any new product or service: i. e., acceptance in the marketplace. Some project that DBS can never succeed, so that the allocation should be eliminated. Others assert that DBS requirements are merely speculative while very real needs for increased spectrum exist for other services, so that the DBS allocation should be reduced while the marketplace demand determines the most desired use of the spectrum.
>
> These arguments are raised by terrestrial operators who were displaced by the DBS allocation. . . . [The Commission] continues to support the development of DBS as an important potential addition to the availability, diversity and technical enhancement of video programming, and hereby reaffirms its allocation decision. . . . *Nowhere in its decisions to date has the Commission explicitly indicated that its allocation decision was based on an expectation as to what particular date would see the first DBS transmission. The*

[15] See Inquiry into the Development of Regulatory Policy in Regard to Direct Broadcast Satellites, 90 FCC 2d 676 (1982).

[16] United States Satellite Broadcasting Co., 1 FCC Rcd 977, ¶ 5 (1986).

> *Commission was now and is aware that time is required for DBS operations to develop. . . . There are still no significant changes or events since [the Allocation Order] that would undermine those findings or conclusions.*[17]

Eventually, the Commission reclaimed some DBS spectrum for failure of the licensees to construct. But, rather than reallocating the spectrum, the FCC reaffirmed its commitment to DBS and re-assigned the orbital locations. Only recently has DBS become a significant, fast-growing competitor in the market for video programming services.[18]

The Multichannel Multipoint Distribution Service ("MMDS") also was not immediately successful and even today is not a complete success. It does, however, serve a market that would otherwise be unserved and constitute a potential entrant into the relatively uncompetitive broadband video market. In 1983, the Commission reallocated 48 MHz of spectrum from ITFS to MMDS to establish a "wireless cable" competitor to wireline cable.[19] Seven years later, the Commission noted that the competitive position of MMDS was "largely unrealized." MMDS

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[17] Id., ¶¶ 6-7 (emphasis supplied).

[18] See Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming, 16 FCC Rcd 6005, 6037-39, ¶¶ 61-67 (2001).

[19] See Amendment of Parts 2, 21, 74 and 94 of the Commission's Rules in regard to Frequency Allocation for the Instructional Television Fixed Service, Multipoint Distribution Service, and Private Operational Fixed Microwave Service, 94 FCC 2d 1203 (1983).

subscribers constituted 0.4% of wireline and wireless cable subscribers.[20] Despite this performance, the Commission allocated additional channels to MMDS to facilitate the competitive viability of MMDS in response to changes in wireline cable industry.[21]

Seven years after that, the growth of MMDS remained limited, allegedly because of economic and technological constraints.[22] At the same time, throughout the 1990s, wireline cable was increasing its penetration and service offerings, and converting to digital technology in order to offer broadband telecommunications and data services. Again, rather than taking the spectrum away from MMDS, the Commission offered MMDS licensees the flexibility to expand their service opportunities by adopting rules to permit them to provide two-way fixed, telecommunications services.[23]

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[20] Amendment of Parts 21, 43, 74, 78 and 94 of the Commission's Rules Pertaining to Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands, Notice of Proposed Rulemaking and Notice of Inquiry, 5 FCC Rcd 971, ¶ 4 (1990).

[21] See Amendment of Parts 21, 43, 74, 78 and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands, Second Report and Order, 6 FCC Rcd 6792 (1991).

[22] See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, 13 FCC Rcd 1034 (1998).

[23] See Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two Way Transmissions, 13 FCC Rcd 19112 (1998).

These examples demonstrate that the failure of MSS to achieve a substantial market share in the first few years of operation is neither unusual nor cause for adverse regulatory intervention. The record in this proceeding, as in the 2 GHz MSS allocation proceedings, has established that the MSS spectrum is needed for services in the public interest. In light of the Commission's long history of recognizing that new services need time to develop and gain acceptance in the marketplace, Commission should preserve these public interest benefits and maintain the spectrum for 2 GHz MSS.

II. THE 2 GHZ MSS SPECTRUM SHOULD BE MAINTAINED TO ENSURE CONTINUED INTERNATIONAL SERVICES THAT BENEFIT THE UNITED STATES AND U.S. SUBSCRIBERS.

The comments from the MSS community have also pointed out that there are critical international implications for any change in the 2 GHz MSS allocation. The United States led the effort to achieve the allocation for MSS in the 2 GHz bands at the 1992 World Administrative Radio Conference and to harmonize the allocations for 2 GHz MSS at the 1995 World Radiocommunication Conference.[24] The United States did not expend these efforts simply to see whether MSS subscribership would reach the one million mark by 2001. Rather, the United States recognized that the lines of communications that would be expanded by MSS would expand U.S. economic interests.

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[24] See 2 GHz MSS Allocation Order, 12 FCC Rcd at 7389-92; Comments of Boeing Company, at 7-8; Comments of Satellite Indus. Assoc., at 6; Comments of TIA-Satellite Comm. Division, at 4-5.

MSS systems offer global, integrated communication services. The global services offered by existing Big LEO and planned 2 GHz MSS "can provide those countries that have not been able to develop a nationwide communication service an 'instant' global and national telecommunication infrastructure."[25]

Curtailing the spectrum available to MSS systems can curtail delivery of these MSS services globally, to the detriment of not only foreign subscribers, but also the United States and U.S. subscribers. Although the service focus of MSS within the borders of the United States is rural and underserved areas, MSS services are available to the U.S. Government and to groups of U.S. citizens who happen to be in other parts of the globe. For example:

- MSS can connect U.S. military and diplomatic personnel overseas with the global telecommunications network from areas where there may be no other telephone service or where the telephone service is not available or disrupted.
- MSS can create an instant office network for employees of U.S. companies searching for oil or other resources in undeveloped areas of the globe.
- MSS can ensure distress and safety communications for commercial shipping and pleasure boats along the Atlantic and Pacific coastlines of North America.
- MSS can give business travelers the security of a telephone number at which they can be reached almost anywhere around the globe without worrying about the reliability or availability of local telephone networks.

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[25] Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile-Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 5936, 5940, ¶ 3 (1994).

- With sufficient bandwidth, MSS can provide all these groups of persons the same advanced telecommunications services available in the United States over terrestrial systems, anywhere around the globe.

Moreover, the continued existence of MSS benefits U.S. companies economically by facilitating the placement and fulfillment of orders for goods and services, by connecting families and business colleagues, and by contributing to the emerging global economy. The consequence of curtailing MSS by taking MSS spectrum is shutting down a line of communication to economically undeveloped areas of the world in derogation of the political, defense and economic interests of the United States and its citizens.

The gaudy subscriber tallies of the terrestrial wireless companies that have demanded reallocation of MSS spectrum cannot be allowed to obscure their failure to bring the benefits and services within the global reach of MSS systems. Indeed, the Commission allocated 70 MHz to MSS at 2 GHz in coordination with the international telecommunications community to ensure that these services are available in the United States and throughout the globe.[26]

> [W]e believe that any 2 GHz MSS allocation should be as consistent as possible with the WARC-92 and WRC-95 allocations. This will help ensure truly universal service. In making our domestic allocation, therefore, we are supporting international plans for MSS in the 2 GHz band. We believe that this allocation will allow the United States to participate in global MSS systems and realize the benefits to consumers of such systems.[27]

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[26] See Comments of Boeing Company, at 7; Comments of Celsat, at 3.

[27] 2 GHz MSS Allocation Order, 12 FCC Rcd at 7395, ¶ 14.

This inherent global economic, communications and foreign affairs interests of MSS is one reason why the Commission works cooperatively with the Department of State and the Department of Commerce to develop U.S. positions on global spectrum allocations. It is the job of these agencies to maintain their expansive, long-range perspective by their commitment to the companies and the industry that, in turn, devoted their time and resources to securing these allocations and will in the future expend the resources necessary to construct, launch and operate the systems that use the spectrum.[28]

In the comments filed by the terrestrial wireless industry, the Commission is asked to ignore the long-term global perspective. The Commission's responsibility and obligation are to provide for the public interest. And, as indicated above, the public interest in MSS runs much deeper than the alleged needs of the mobile telephone giants.

[28] See Comments of TMI, at 3-5.

III. CONCLUSION

For the reasons set forth above and in its initial comments, Globalstar urges the Commission to preserve the existing 2 GHz MSS allocation.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, William D. Wallace, hereby certify that I have on this 8th day of November, 2001, caused to be served true and correct copies of the foregoing "Reply Comments of Globalstar, L.P." upon the following parties via first-class United States mail, postage prepaid:

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